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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,497	03/09/2004	Nelson A. Merritt		3023

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EXAMINER	
THOMASSON, MEAGAN J	
ART UNIT	PAPER NUMBER
3714	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/796,497	MERRITT, NELSON A.	
	Examiner	Art Unit	
	Meagan Thomasson	3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) *1-4* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The examiner acknowledges the cancellation of claims 1-4. Claims 5-8 have been added.

Specification

The amendment filed November 28, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows (emphasis added):

> The best mode...for carrying out this invention uses a use general purpose computer and multiple software design programs delineated in previous paragraphs to develop the puzzle(s***) in independent stages. Each software program generates a part of the design and production in one stage of a series of stages.*** This is in contrast to existing practice where puzzle design is done by generating the data for the information content by means of a single commercial program~ any one of several that are generally available and may be purchased or licensed.
>
> The invention designs and produces a series of progressive games that contain sufficiently robust learning content to support a wide variety of study materials. The learning software has superior functionality to support large numbers of users. ***The software programs design the puzzles in sequence of stages, the first being an initial structure, the second a word list fill-in stage and the final stage, a table software program that completes the puzzle design. More or less stages may be used.***
>
> Progressive learning is enabled by providing a large number of individual games to accommodate the steps found in each learning syllabus. These individual steps would require a relatively unlimited number of gaming formats to be accommodated if existing computer generated crossword puzzle designs were used. ***The invention provides a design method that reduces the number of games required by maximizing the functionality of each game by the utilization of the individual software programs for initial design phase,***

fill-in phase and a final production phase. An advantage is that each stage may be optimized independently of the others. In this manner, the information content in each game is robust, the maximum amount of information is achieved within each game, and the functionality of each game is optimized.

There are disadvantages to the existing single-stage design process. The current state of the art is such that a puzzle designed by present single software package techniques has limited information content and thus its capability is only rudimentary at best. It is inadequate for the complex progressive enhancement product contemplated by this invention. The information content in each puzzle, that is, the ratio of the number squares containing letters in the puzzle will be relatively low compared with the number of blank squares when existing single program crossword generator software is used. While existing single sottware packages may have several stages within the program, they cannot be run independently and optimized independently. Each stage is dependent on the others and each suffers the limitations of the others in the final product.

After the initial design is set up, the second stage software to find words is used. This software generates additional words that can be can be entered, and the corresponding clue or word that is selected can be progressively be placed in the information content data base until the desired amount of content is reached. The final stage utilizes table-making software as the principal tool for designing and producing the finished puzzle. This part of the work includes generating the frame, identifying and numbering the spaces, and identifying the blank spaces. Table generating software has many additional features suitable for this purpose such as superscript/subscript numbering of the boxes, adjusting the size and shape of the puzzle and adjusting the background shading. All of these features are selectable and completely independent of the prior steps. The advantages of this innovative method are several. The puzzles are computer generated without limitations of the learning content normally found with existing methods. Extensive variations in content may also be accommodated. Full automation of the process described herein enables rapid and economical design and the casting of the final puzzle in a table generated framework will enable use of ***variable shading of background, character box numbering in subscript superscript and other giving complete freedom in the formal content and sizing of the final product***.

Specifically, the disclosure as originally filed did not contain any of the above description of the puzzle production stages. P. 3, second paragraph provides the following description of the puzzle production process "Games are constructed initially

by inserting word lists and clue lists into the computer. Stored programs then create and print game matrices and clue lists". No further description is provided.

Additionally, the disclosure as originally filed did not contain any of the above description of formatting the generated puzzle, including the ability to adjust numbering of boxes, size and shape of the puzzle, background shading, etc.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding the limitations of claim 6 that the stages of design include steup, word fill and production stages, this is considered new matter as it was not disclosed in the original specification. Description of the puzzle design process was given on P. 3,

paragraph 2 of the original disclosure as "Games are constructed initially by inserting word lits and clue lists into the computer. Stored programs then create and print game matrices and clue lists". There is no mention of the claimed stages.

Regarding the limitations of claim 7 that the method provides information for learning grammatical system of conjugation, this is considered new matter as it was not disclosed in the original specification. Description of grammatical relationships that may be taught by the invention was given on P. 7, paragraph 2 of the original disclosure as "grammatical relationships such as parsing and cataloging". There is no mention of conjugation.

Regarding the limitations of claim 8 that there is a computer based dictionary comprising a combination of alphabetical vs. non-alphabetical terms that use sign Chinese radicals and groups and Greek characters, this is considered new matter as it was not disclosed in the original specification. Description of pictorial clues was given on P. 7, paragraph 1, as "A set of pictures of commonly used items, such as household utensils" and "pictures of items of interest to travelers such as airport, restaurant, post office, hotel, and others may be used as clues". P. 8, first paragraph describes the use of clues shown in a pictorial form of sign language, and P. 8, second paragraph describes "pictures may be used as clues with the word list being in any desired language", however Chinese radicals and groups and Greek characters are not specifically mentioned, and thus cannot be included in the limitations of the claim.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "each stage" and "the other stages" in line 1. There is insufficient antecedent basis for this limitation in the claim, as claim 6, nor the claims from which claim 6 depends, recite said stages.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by "EclipseCrossword.com", (copyright date 1999).

Regarding claims 4-6, EclipseCrossword discloses a system and method for the generation of crossword puzzles that produces high levels of information content in the puzzles to support language learning and reduces the number of individual games required for any syllabus.

Specifically, the software available at EclipseCrossword.com allows a user to input a list of words and clues, and the program generates a crossword puzzle automatically. As disclosed in the supporting About.com article (published July 16,

2001) detailing the EclipseCrossword.com invention, there are multiple puzzles with various difficulty levels.

Each puzzle (Numbers, Fun & Games, and Cuerpo y salud) may be generated independently of each other. That is, a user may input different words and clues that are to be used in the generation of each puzzle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over "EclipseCrossword.com", (earliest date available 1999, copyright date).

Regarding claim 7, specifically the limitation that the software provide content for the purpose of learning grammatical systems, EclipseCrossword include the ability to display and utilize accent marks (supporting About.com article, 2nd paragraph), which

are a known grammatical system. Thus, it would have been obvious to one of ordinary skill at the time of the invention to provide content to the user that allows them to learn any grammatical system for a given language.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over "EclipseCrossword.com", (copyright date 1999) in view of "Spell Well" (available October 2, 2001).

EclipseCrossword, as described above, discloses a crossword puzzle generation system and method for the purpose of learning a foreign language that allows a user to input a list of words and clues and the program generates a crossword puzzle automatically. EclipseCrossword also discloses the use of a PlayVillage (copyright date 2000) crossword puzzle featuring pictorial clues. Specifically, a user selects a desired row or column and a pictorial clue appears on the right-hand side of the screen, accompanied by a verbal clue in the Dutch language. The user then fills in the selected row or column with the corresponding answer in English.

EclipseCrossword does not disclose the use of sign language pictorial clues. However, Spell Well discloses an interactive American Sign Language Game that provides users with "over 2,500 ASL sign and graphic vocabulary prompts" (Spell Well Product Description). Spell Well games include a crossword puzzle game format.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of EclipseCrossword and analogous invention Spell Well to create a pictorial crossword puzzle game that allows a player to learn a second language through the use of pictures, including sign language graphics. One would be

language through the use of pictures, including sign language graphics. One would be motivated to do so in order to appeal to a wider variety of users.

Response to Arguments

Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection. (Applicant did not submit any arguments regarding the previous rejection of claims 1-4. Claims 1-4 have been cancelled and claims 5-8 were added without comment on the prior art).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent prior art includes Shpiro (US 2002/0150869 A1), drawn to a context-responsive spoken language instruction, wherein Fig. 14 discloses the use of a crossword puzzle to aid in the learning of a foreign language.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meagan Thomasson whose telephone number is (571) 272-2080. The examiner can normally be reached on M-F 830-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert E Pezzuto
Supervisory Patent Examiner
Art Unit 3714

Meagan Thomasson
April 16, 2007